

Teaching Agile in Business Analyst Education: Course Design and First Experiences

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ABSTRACT

This paper outlines a course design for teaching agile in the context of project management education in a business analysis professional master's programme and reports on the experiences in the initial course offering. With the rise of agile approaches outside of software development, agile competences for other roles such as business analysts become increasingly important. However, common approaches to teaching agile are often tied to coding as part of software development or related topics and are therefore unsuited for future business analysts with little or no software development experience. The presented approach here relies on traditional project management deliverables (such as business cases or project plans) instead, which student teams have to develop in an agile process for a fictional client who is role-played by the lecturer. In addition, students keep personal agile learning blogs where they reflect on their agile way of working and the effects of process changes that their team applies over time. This approach allows students to develop traditional and agile project management competencies simultaneously, supported by reflective meta-competencies. The first experiences are very encouraging with respect to the intended learning outcomes, but also show some room for improvement.

Keywords: agile project management, agile education, business analysts

1. INTRODUCTION AND CONTEXT

Agile methods have become commonplace in the IT industry, but also beyond – as evident, for instance, by the formulation of Modern Agile principles (Modern Agile, 2017) that do not even mention software anymore. For business analysts, there is even an official agile extension to the Business Analysis Body of Knowledge (BABOK) that outlines how agile principles, values and techniques apply to the business analyst profession (International Institute of Business Analysis and Agile Alliance, 2017). Simultaneously, traditional project management approaches have not become outdated in practice, but are often blended with agile approaches (West, 2011).

Against this backdrop, the question arose how to equip future business analysts with traditional and agile project management skills in the “Professional Master of Business Analysis” programme offered by the Wellington ICT Graduate School. The programme is open for students with a bachelor's degree and a non-IT background. While many of its courses

have project components, the designated place to convey project management competences is a second trimester course named “Management of IT Projects for Business Analysts” (MBUA 513). A specific goal of the programme is the development of workplace-ready competences and not merely conveying basic or applied knowledge (Young, 2005).

2. COURSE OBJECTIVES AND CHALLENGES

Given the context outlined in the previous section, the MBUA 513 course therefore needs to develop both traditional and agile project management competences. Moreover, since it can be expected that the business analyst profession will be consistently changing, it is another course objective to develop the students' self-improvement skills to enable them to keep up or perhaps even help shape these changes in the future.

However, agile principles, methods, and techniques are commonly conveyed in technical courses such as programming / software development or user interface design (Erturk & MacCallum, 2015). Course designs that would not require student expertise in software development are rare. For instance, Cubric proposes to have the students develop a wiki on agile project management in an agile fashion (Cubric, 2013). The downside here is that there are no dedicated clients or stakeholders (except possibly the students themselves) to interact with and with specific ideas about what is valuable to them. For future business analysts however, the competence to collaborate closely with stakeholders is a very important one.

3. THE COURSE DESIGN

The chosen course design for the MBUA 513 course addresses these objectives and challenges as follows: For their assignments, the students work in agile processes based on the Scrum method (Schwaber, 2009). The assignment deliverables are not working software, but traditional project management deliverables such as business cases or project plans.

The students develop these deliverables in teams of 4 or 5 and in close interaction with a fictional client in a fictional setting. The students are already familiar with the fictional setting from their first-trimester courses: a grouping coffee shop chain called

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Context

- 2nd trimester course “Management of IT Projects for Business Analysts” (MBUA 513) as part of the Wellington ICT Graduate School’s “Professional Master of Business Analysis”
- Students have had a business analysis project experience in their first trimester, but without exposure to formal project management guidance (traditional or agile)

Course Objectives and Challenges

- Competencies cover project management (traditional and agile)
- Prepare students for a locally supervised industry BA project in the final trimester
- Develop actual project management competences for the students’ future work practice
- Not software development is out of scope for the course and the programme

Course Design (focus on the agile parts, weeks 2-9)

Agile Clerk	Traditional project mgt.	Agile project mgt.
Seminar on business case content, project management tool usage and a project scope management case	Seminar on traditional project planning and project and risk management frameworks, approaches and techniques	Traditional project mgt. competences: develop a business case, plan projects and risks, engage with stakeholders, work in teams, use the tools
Assignment 2a: Students develop a business case for a fictional client (being role played by the lecturer). Students are asked to use an agile process (similar to Scrum) with short iterations to ensure the client’s expectations are met.	Assignment 2a: Students develop a project and risk management plan for the same fictional client and setting. Students are asked to keep using and refining their agile process to ensure the client’s expectations are met.	Agile project mgt. competences: use agile methods / tools / techniques, deliver value for a client in short iterations
Assignment 2b: Students are asked to change the agile team process from iteration to iteration (new techniques, tools etc.). Students reflect in agile learning blogs on how effective their way of working is and how the changes to their agile team processes played out.	Assignment 2b: Students are asked to keep changing the agile team process from iteration to iteration. Students keep reflecting in agile learning blogs on how effective their way of working is, and how the changes to their agile team processes played out.	Meta-competences: reflect on learning and working processes, and improve them

Course Evaluation

- The agile blogs speak of a generally quite transformative student experience
- Side effect: Non-native speakers report becoming increasingly confident speaking English
- Supplementary anonymous survey confirms that students appreciated the agile experience for the course assignments & felt well-acquainted with agile principles, values & techniques

Envisioned Future Course Improvements

- Smoother transition from the agile clerk to self-guided agile processes
- More guidance for the self-appointed Scrum Masters (perhaps weekly stand-ups)
- More direct exposure to generally useful agile techniques and tools in the seminar
- More guidance for personal reflection and how to utilize the personal blog writing process

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“Coffee Co.”. The setting is conveyed through a set of animated videos where key stakeholders are interviewed about the challenges they are facing in their work environment. The interactions with the fictional client in the course are role-played by the lecturer whose role is tasked with overseeing the fictional company’s professionalisation. To distinguish between the two roles (lecturer or client), the lecturer wears one of two hats (with ‘Vic’ or ‘Coffee Co.’ logos on them) for each student interaction. The students regularly present intermediate results to the fictional client in their sprint reviews. The length of a sprint is not fixed, but up to the student teams to decide at the start of each sprint. A large part of the marks the students receive for their deliverables is based on the extent the client’s requirements and feedback were addressed in the deliverables.

The seminar part of the course conveys the necessary foundations of traditional and agile project management the students need to draw on in their assignment work. Early in the course, two experienced agile facilitators from industry introduced the students to the agile way of working in 2-hour workshop (‘agile clinic’). In the subsequent weeks, small in-class exercises scaffold the transition from ‘textbook knowledge’ to the application of that knowledge and the subsequent competence development in the role-play setting and the agile process for the assignments.

Moreover, to develop meta-competences such as reflective capability and self-improvement (Bogo, et al., 2013), the students are asked to identify what they would like to stop, start, and continue doing in their agile processes in the regular retrospectives at the end of each sprint, with the goal of increasing the next sprint’s effectiveness. Over time, some student teams this year blended the Scrum process with Kanban principles (Sjøberg, Johnsen, & Solberg, 2012), or switched to professional communication tools such as Slack instead of relying on Facebook groups and messenger. In addition, the students are asked to reflect in private agile learning blogs on their agile way of working and the effects their changes to their agile processes have. These agile blogs form a key part of the assessments and students need to update them regularly.

4. COURSE EVALUATION

After the agile part of the course was concluded, the students were anonymously surveyed about their experiences. Table 1 shows the results of five key questions from that survey.

Table 1: Survey results (n=11, response rate=50%)

Question (5-point Likert scale)	Mean	Std. dev
I found it helpful to experience the agile principles and values through working on course assignments in an agile fashion	1.45	0.52
I found it helpful to reflect on my agile experiences in the agile blogs	2.55	1.21
I feel now well-acquainted with agile principles and values	1.55	0.68
I feel now well-acquainted with agile techniques and Scrum	1.73	0.65
I acquired meaningful agile-related skills for my future as a BA	1.82	0.75

Taken together with the generally high quality of the assignment deliverables (business case & project plan), the survey results indicate that the traditional as well as the agile project management learning outcomes were reached. Moreover, the agile blogs speak of a generally quite transformative student experience – particularly for those

students without previous experience in agile ways of working. As a positive side effect, non-native speakers of English also reported becoming increasingly confident speaking out within their teams and interacting verbally with the fictional client.

5. CONCLUSION AND OUTLOOK

Overall, the evaluations indicate that the course objectives were quite well fulfilled in the initial offering. However, based on student feedback as well as lecturer observations, there are also several areas with room for future improvement.

First, there can be a smoother transition from the agile clinic to the self-guided agile processes. While a somewhat ‘slow start’ to embrace the agile way of working is in keeping with findings from the literature (Erturk & MacCallum, 2015), additional support in this area could foster a quicker fulfilment of the course objectives. One promising way is to ensure that every team experiences the benefits of receiving in-depth client feedback early. Such an experience is particularly noteworthy because such interactions are not common in tertiary education courses and the benefits may be unfamiliar for the students.

Further support could also include more guidance for the self-appointed Scrum Masters within the student teams. These could take the form of weekly stand-ups with each student team Scrum Master and the lecturer as the ‘Scrum Master Master’ (perhaps while donning an All Blacks cap for this role) to exchange experiences on agile process performances. Moreover, there would also be room for more direct exposure to potentially useful agile techniques and tools in the seminar parts of the course so that the students would not have to rely as much on reference material and their own initiative to come up with potential innovations for their agile working processes.

Lastly, since not all students found it helpful to reflect on their agile way of working in blogs (see Table 1), additional early guidance on reflection and blog writing could help the development of the students’ meta-competences further.

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